

1   **WHAT IS CLAIMED IS:**

2           1. An adjustable auxiliary apparatus of stable air conditioning for human  
3   respiratory system and the apparatus comprising:

4           a platform having a top, a bottom, a channel defined transversally in the  
5   top and a filter case having an intake air entrance and an air exit;

6           an air treatment assembly mounted in the platform and comprising

7                   an air filter mounted in the filter case and comprising

8                           a housing mounted in the filter case and having an air  
9   inlet communicating with the intake air entrance and an air outlet aligned with  
10   the air exit;

11                               a filtering core mounted in the housing; and

12                               a powered fan mounted in the filtering core to draw air  
13   inward the housing;

14           an air duct mounted in the channel and having a transverse  
15   segment, a vertical segment, an interior periphery, an exterior periphery, a  
16   narrowed end and a top end, the narrowed end formed at the transverse segment  
17   and being fitted and held in the aligned air exit and air outlet, and the top end  
18   formed at the vertical segment;

19                   a humidity control mounted in the platform and comprising a  
20   condenser mounted on the exterior periphery of the air duct on the transverse  
21   segment and a condenser controller to control the condenser;

22                   a heating device mounted in the platform and comprising a  
23   heater mounted on the exterior periphery of the air duct on the transverse  
24   segment and a heater controller to control the heater;

1                   a water vapor generator mounted on the platform and  
2   comprising  
3                   a water vapor tank with a top, a bottom and an inner  
4   space connected to the vertical segment of the air duct where the top end in the  
5   vertical segment of the air duct connects to the water vapor tank at the top; and  
6                   an ultrasonic generator mounted at the bottom of the  
7   water vapor tank to produce ultrasonic waves; and  
8                   a clean air venting hose connected to the water vapor tank at the  
9   top of the water vapor tank; and  
10           a host controlling assembly mounted in the platform and comprising  
11                   a modular controlling circuit board operating a servo control  
12   system and connected electrically to the condenser and heater controllers, the  
13   powered fan of the air filter and the ultrasonic generator of the water vapor  
14   generator;  
15                   multiple control knobs connected electrically to the modular  
16   controlling circuit board; and  
17                   multiple sensing elements mounted respectively on the  
18   transverse segment at the narrowed end and the clean air venting hose.

19           2. The apparatus as claimed in claim 1, wherein the filtering core of the  
20   air filter comprises

21           a porous outside filtering cage made of a fabric of irregular fiberglass  
22   and fiber;

23           a porous inside filtering cage mounted in the outside filtering cage and  
24   having a smell adsorption mixture of active carbon, potassium permanganate

1 and zeolite; and

2 a filtering fine mesh contains active carbon wrapped radially around the  
3 outside filtering cage.

4 3. The apparatus as claimed in claim 1, wherein water vapor generator  
5 further comprises

6 a supplementary water device having at least one supplementary water  
7 tank communicating with the water vapor tank at the bottom; and

8 a water level controlling device comprising

9 an electromagnetic valve to control flow of water out of the at  
10 least one supplementary water tank to enter the water vapor tank; and

11 a water level switch attached to the water vapor tank and  
12 electrically connected to the electromagnetic valve.

13 4. The apparatus as claimed in claim 1, wherein the air treatment  
14 assembly further comprises an ozone generator mounted in the platform,  
15 controlled by the modular controlling circuit board and having a connecting hose  
16 connected to the transverse segment to generate ozone to enter the transverse  
17 segment.

18 5. The apparatus as claimed in claim 1, wherein the interior periphery of  
19 the air duct has a layer of thin film of photo catalysis, titanium dioxide (TiO<sub>2</sub>).

20 6. The apparatus as claimed in claim 1, wherein the clean air venting  
21 hose has multiple separated segments, a connector, a connecting duct and a  
22 thermostat heating coil wrapped around the clean air venting hose to maintain  
23 the air temperature in the clean air venting hose at a given level.

24 7. The apparatus as claimed in claim 1 further comprising a separated

1 display electrically connected to the modular circuit board to show air conditions  
2 handled by the apparatus.

3 8. The apparatus as claimed in claim 2, wherein the water vapor  
4 generator further comprises

5 a supplementary water device having at least one supplementary water  
6 tank communicating with the water vapor tank at the bottom; and

7 a water level controlling device comprising

8 an electromagnetic valve to control flow of water out of the at  
9 least one supplementary water tank to enter the water vapor tank; and

10 a water level switch attached to the water vapor tank and  
11 electrically connected to the electromagnetic valve.

12 9. The apparatus as claimed in claim 8, wherein the air treatment  
13 assembly further comprises an ozone generator mounted in the platform,  
14 controlled by the modular controlling circuit board and having a connecting hose  
15 connected to the transverse segment to generate ozone to enter the transverse  
16 segment.

17 10. The apparatus as claimed in claim 9, wherein the interior periphery  
18 of the air duct has a layer of thin film of photo catalysis, titanium dioxide (TiO<sub>2</sub>).

19 11. The apparatus as claimed in claim 10, wherein the clean air venting  
20 hose has multiple separated segments, a connector, a connecting duct and a  
21 thermostat heating coil wrapped around the clean air venting hose to maintain  
22 the air temperature in the clean air venting hose at a given level.

23 12. The apparatus as claimed in claim 11 further comprising a separated  
24 display electrically connected to the modular circuit board to show air conditions

1 handled by the apparatus.